SEQUENCE LISTING

<110> RASMUSSEN, Poul Baad
     DRUSTRUP, Jørn
     RASMUSSEN, Grethe
     PEDERSEN, Anders Hjelholt
     SCHAMBYE, Hans Thalsgård
     ANDERSEN, Kim Vilbour
     BORNÆS, Claus
     Maxygen ApS
     Maxygen Holdings Ltd.

<120> NEW INTERFERON BETA-LIKE MOLECULES

<130> 0228us410

<150> US 60/272,116
<151> 2001-02-27

<150> US 60/343,436
<151> 2001-12-21

<150> US 60/302,140
<151> 2001-06-29

<150> US 60/316,170
<151> 2001-08-30

<150> not yet assigned
<151> 2002-02-19

<150> DK PA 2001 00333
<151> 2001-03-01

<150> US 09/648,569
<151> 2000-08-25

<160> 57

<170> FastSEQ for Windows Version 4.0

<210> 1
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<213> Homo sapiens

<220>
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<222> (76)...(636)

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gttcgtgttg tcaac atg acc aac aag tgt ctc ctc caa att gct ctc ctg 111
                 Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu
                  1   5   10

1

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ttg tgc ttc tcc act aca gct ctt tcc atg agc tac aac ttg ctt gga    159
Leu Cys Phe Ser Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly
        15                  20                  25

ttc cta caa aga agc agc aat ttt cag tgt cag aag ctc ctg tgg caa    207
Phe Leu Gln Arg Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln
    30                  35                  40

ttg aat ggg agg ctt gaa tac tgc ctc aag gac agg atg aac ttt gac    255
Leu Asn Gly Arg Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp
 45                  50                  55                  60

atc cct gag gag att aag cag ctg cag cag ttc cag aag gag gac gcc    303
Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala
                65                  70                  75

gca ttg acc atc tat gag atg ctc cag aac atc ttt gct att ttc aga    351
Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg
            80                  85                  90

caa gat tca tct agc act ggc tgg aat gag act att gtt gag aac ctc    399
Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu
            95                 100                 105

ctg gct aat gtc tat cat cag ata aac cat ctg aag aca gtc ctg gaa    447
Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu
    110                 115                 120

gaa aaa ctg gag aaa gaa gat ttc acc agg gga aaa ctc atg agc agt    495
Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser
125                 130                 135                 140

ctg cac ctg aaa aga tat tat ggg agg att ctg cat tac ctg aag gcc    543
Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala
                145                 150                 155

aag gag tac agt cac tgt gcc tgg acc ata gtc aga gtg gaa atc cta    591
Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu
                160                 165                 170

agg aac ttt tac ttc att aac aga ctt aca ggt tac ctc cga aac        636
Arg Asn Phe Tyr Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn
            175                 180                 185

tgaagatctc ctagcctgtg cctctgggac tggacaattg cttcaagcat tcttcaacca 696
gcagatgctg tttaagtgac tgatggctaa tgtactgcat atgaaaggac actagaagat 756
tttgaaattt ttattaaatt atgagttatt tttatttatt taaattttat tttggaaaat 816
aaattatttt tggtgcaaaa gtca                                         840
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<210> 2
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<212> PRT
<213> Homo sapiens

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<221> CHAIN
<222> (1)...(166)
<223> hIFNB mature sequence

<400> 2
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1                   5                   10                  15
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
                20                  25                  30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
            35                  40                  45
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
        50                  55                  60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65                  70                  75                  80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
                85                  90                  95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
                100                 105                 110
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
            115                 120                 125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
        130                 135                 140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145                 150                 155                 160
Thr Gly Tyr Leu Arg Asn
                165


<210> 3
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 3
ggctagcgtt taaacttaag cttcgccacc atgaccaaca agtgcctgct ccagatcgcc 60
ctgctcctgt                                                        70

<210> 4
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 4
acaacctgct cggcttcctg cagaggagtt cgaacttcca gtgccagaag ctcctgtggc 60
agctgaacgg                                                        70

<210> 5
<211> 70
<212> DNA
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<220>
<223> primer

<400> 5
gaacttcgac atccccgagg aaatcaagca gctgcagcag ttccagaagg aggacgccgc 60
tctgaccatc                                                      70


<210> 6
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 6
ttccgccagg actccagctc caccggttgg aacgagacca tcgtggagaa cctgctggcc 60
aacgtgtacc                                                      70


<210> 7
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 7
aggagaagct ggagaaggag gacttcaccc gcggcaagct gatgagctcc ctgcacctga 60
agcgctacta                                                      70


<210> 8
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 8
ggagtacagc cactgcgcct ggaccatcgt acgcgtggag atcctgcgca acttctactt 60
catcaaccgc                                                      70


<210> 9
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 9
caccacactg gactagtgga tccttatcag ttgcgcaggt agccggtcag gcggttgatg 60
aagtagaagt                                                      70


<210> 10
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<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 10
aggcgcagtg gctgtactcc ttggccttca ggtagtgcag gatgcggcca tagtagcgct 60
tcaggtgcag   70

<210> 11
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 11
ctccttctcc agcttctcct ccagcacggt cttcaggtgg ttgatctggt ggtacacgtt 60
ggccagcagg   70

<210> 12
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 12
gagctggagt cctggcggaa gatggcgaag atgttctgca gcatctcgta gatggtcaga 60
gcggcgtcct   70

<210> 13
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 13
cctcggggat gtcgaagttc atcctgtcct tcaggcagta ctccaggcgc ccgttcagct 60
gccacaggag   70

<210> 14
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 14
caggaagccg agcaggttgt agctcatcga tagggccgtg gtgctgaagc acaggagcag 60

ggcgatctgg   70

<210> 15
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 15
ctgctccaga tcgccctgct cctgtgcttc agcaccacgg ccctatcgat gaagcaccag 60
caccagcatc   70

<210> 16
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 16
cactgcttac tggcttatcg aaattaatac gactcactat agggagaccc aagctggcta 60
gcgtttaaac   70

<210> 17
<211> 70
<212> DNA
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<220>
<223> primer

<400> 17
caggaagccg agcaggttgt agctcatctg ttggtgttga tgttggtgct gatgctggtg 60
ctggtgcttc   70

<210> 18
<211> 70
<212> DNA
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<220>
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<400> 18
agcagggcga tctggagcag gcacttgttg gtcatggtgg cgaagcttaa gtttaaacgc 60
tagccagctt   70

<210> 19
<211> 40
<212> DNA
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<220>
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<400> 19
ccgtcagatc ctaggctagc ttattgcggt agtttatcac   40

<210> 20
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 20
gagctcggta ccaagctttt aagagctgta at   32

<210> 21
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 21
gctgaacggg cgcctggagt actgcctgaa ggacaggatg aacttcgaca tccccgagga 60
aatccgccag ctgcagc   77

<210> 22
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 22
tctccacgcg tacgatggtc caggcgcagt ggctg   35

<210> 23
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 23
caccacactg gactagtgga tccttatcag ttgcgcaggt agccggtcag gcggttgatg 60
aagtagaagt   70

<210> 24
<211> 31
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<220>
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<400> 24
catcagcttg ccggtggtgt tgtcctcctt c                                    31


<210> 25
<211> 31
<212> DNA
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<220>
<223> primer

<400> 25
gaaggaggac aacaccaccg gcaagctgat g                                    31


<210> 26
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 26
cacactggac tagtaagctt ttatcagttg cgcaggtagc                           40


<210> 27
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 27
gaggagttcg aacttccagt gccagcgcct cctgtggcag ctgaacg                   47


<210> 28
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 28
cgcggatcca tatgaccaac aagtgcctg                                       29


<210> 29
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 29
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cgcggatcct tatcagttgc gcag                                                24

<210> 30
<211> 33
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<220>
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<400> 30
tttaaactgg atccagccac catgaccaac aag                                       33

<210> 31
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
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<400> 31
cggccatagt agcgcttcag gtgcagggag ctcatcagct tgccggtggt gttgtcctcc 60
ttc                                                                       63

<210> 32
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
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<400> 32
gaaggaggac aacaccaccg gcaagctgat gagctccctg cacctgaagc gctactatgg 60
ccg                                                                       63

<210> 33
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<220>
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<400> 33
ggcgtcctcc ttggtgaagt tctgcagctg                                          30

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<211> 39
<212> DNA
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<220>
<223> primer

<400> 34
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atatatccca agcttttatc agttgcgcag gtagccggt   39

<210> 35
<211> 30
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<220>
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<400> 35
cagctgcaga acttcaccaa ggaggacgcc   30

<210> 36
<211> 34
<212> DNA
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<220>
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<400> 36
cgcggatcca gccaccatga ccaacaagtg cctg   34

<210> 37
<211> 89
<212> DNA
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<220>
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<400> 37
aactggatcc agccaccatg accaacaagt gcctgctcca gatcgccctg ctcctgtgct 60
tcagcaccac ggccctagcc cagagctac   89

<210> 38
<211> 92
<212> DNA
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<220>
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<400> 38
aactggatcc agccaccatg accaacaagt gcctgctcca gatcgccctg ctcctgtgct 60
tcagcaccac ggccctagcc cagatgagct ac   92

<210> 39
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<212> DNA
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<220>
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<400> 39

gtcctccttg gtgaagttga acagctgctt   30

<210> 40
<211> 30
<212> DNA
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<400> 40
aagcagctgt tcaacttcac caaggaggac   30

<210> 41
<211> 30
<212> DNA
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<220>
<223> primer

<400> 41
gtcctccttg gtgaagttca ccagctgctt   30

<210> 42
<211> 30
<212> DNA
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<220>
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<400> 42
aagcagctgg tgaacttcac caaggaggac   30

<210> 43
<211> 30
<212> DNA
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<220>
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<400> 43
gtcctccttg gtgaagttcc acagctgctt   30

<210> 44
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 44
aagcagctgt ggaacttcac caaggaggac   30

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<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 45
cagcttgccg gtggtgttga actccttctc                              30


<210> 46
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
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<400> 46
gagaaggagt tcaacaccac cggcaagctg                              30

<210> 47
<211> 30
<212> DNA
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<220>
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<400> 47
cagcttgccg gtggtgttca cctccttctc                              30

<210> 48
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 48
gagaaggagg tgaacaccac cggcaagctg                              30


<210> 49
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 49
His His His His His His
 1               5
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<210> 50
<211> 8
<212> PRT
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<220>
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<400> 50
Met Lys His His His His His His
 1   5

<210> 51
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 51
Met Lys His His Ala His His Gln His His
 1   5   10

<210> 52
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 52
Met Lys His Gln His Gln His Gln His Gln His Gln His Gln
 1   5   10

<210> 53
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 53
Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 1   5   10

<210> 54
<211> 8
<212> PRT
<213> Artificial Sequence

13

<220>
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<400> 54
Asp Tyr Lys Asp Asp Asp Asp Lys
 1   5

<210> 55
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide tag

<400> 55
Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
 1   5

<210> 56
<211> 166
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 56
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1   5   10   15
Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
            20   25   30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
        35   40   45
Asn Phe Thr Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
    50   55   60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65   70   75   80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
                85   90   95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Phe Asn Thr
            100   105   110
Thr Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
            115   120   125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
        130   135   140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145   150   155   160
Thr Gly Tyr Leu Arg Asn
                165

<210> 57
<211> 166

14

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 57
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 1   5   10   15
Ser Gln Arg Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
            20   25   30
Arg Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Arg Gln Leu Gln
            35   40   45
Asn Phe Thr Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
        50   55   60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65   70   75   80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
            85   90   95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Phe Asn Thr
            100   105   110
Thr Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
        115   120   125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
        130   135   140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145   150   155   160
Thr Gly Tyr Leu Arg Asn
            165

15